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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/704,936	NEITZEL ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2476	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/08/2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,8-18,22-32,34-41,43-50,52-56 and 58-64* is/are pending in the application.

4a) Of the above claim(s) *2,7,19-21,33,42,51 and 57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6,8-18,22-32,34-41,43-50,52-56 and 58-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1, 3 – 6, 8 – 18, 22 – 32, 34 – 41, 43 – 50, 52 – 56, 58 – 64 are pending.

Claims 2, 7, 19, 20, 21, 33, 42, 51, 57 had been canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3 – 6, 8 – 18, 22 – 32, 34 – 41, 43 – 50, 52 – 56, 58 – 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liebowitz et al. (US 5812545) in view of Toporek et al. (US 6460085 B1).

Regarding claim 1, Liebowtz et al. disclose a method of transmitting data through a communication link having a bandwidth using a plurality of communication connections via the communication link *("prioritizes data into bursts using a fragmentation protocol, and organizes bursts in at least one of a plurality of lots constituting a time division multiple access (TDMA) frame,..and dynamic assignment of slots depends on the committed information rates (CIR)" interpreted as a bandwidth using a plurality of communication connections; Abstract, col. 2, lines 30 – 38, 47 – 62, Fig. 7B, Fig. 2, col. 5, lines 58 – 64)*, the method comprising the steps of: associating each one of a plurality of a worker

objects for each one of the plurality of communication connections *("multiple Frame Handler modules to support different formats and a multiplicity of communication ports….creates an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module" interpreted as establishing a worker object for each one of the communication connections; Fig. 3, Fig. 4, col. 4, lines 30 – 50)*; distributing the data amongst the worker objects *(modules to support different formats and a multiplicity of communication ports, ..creates an outgoing data queue corresponding to each user access device for storing data received therefrom" interpreted as distributing the data amongst the worker objects; Fig. 3, Fig. 4, col. 4, lines 32 – 47);* forming messages using the distributed data within each respective worker object of the plurality of worker objects, based on a parameter of the respective worker object *("collection of fragments is called the payload" interpreted as forming messages using the distributed data within each worker object, and "payload header which identifies the location of each fragment" interpreted as a parameter of that worker object; col. 4, lines 52 – 67);* wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth *(element 174, element 176, Fig. 8, col. 17, lines 10 – 26, lines 44 – 57);*

Liebowitz et al. also disclose allocating a predetermined portion of the bandwidth to each of the plurality of communication connections *("data queue is preferably assigned its own CIR" interpreted as allocating a predetermined portion of the bandwidth to each of the plurality of communication connections; Fig. 7B, col. 5, lines 1 – 37; "the port CIR is a guaranteed bandwidth from the port" also correlates to allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; col. 16, lines 47 – 53).*

Liebowitz et al. do not disclose explicitly delivering the messages formed within each worker object to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth.

Toporek et al. in the same field of endeavor teach delivering the messages to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth *("the information goes through the transport layer (e.g. TCP) and then through the IP layer which is the networking layer….." interpreted as delivering the messages to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth; Fig. 2, col. 10, lines 21 – 67; col. 17, lines 34 – 52).*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Liebowitz et al. to include the features of delivering the messages to an underlying layer of the plurality of

communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth as taught by Toporek et al. in order to provide a method for managing memory for buffering information communicated over an internet connection established across a satellite link *(as suggested by Toporek et al., see col. 3, lines 7 – 10).*

Regarding claim 3, Liebowtz et al. disclose the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of allocating different predetermined portions of the bandwidth to two of the plurality of communication connections *("data queue is preferably assigned its own CIR" interpreted as allocating a predetermined portion of the bandwidth to each of the plurality of communication connections; Fig. 7B, col. 5, lines 1 – 37; "the port CIR is a guaranteed bandwidth from the port" also correlates to allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; col. 16, lines 47– 53, "a stream request is a request for a guaranteed amount of bandwidth, stream requests are usually made on behalf of voice and video calls" interpreted as allocating different predetermined portions of the bandwidth to two of the plurality of communication connections; col. 5, lines 58 – 62).*

Regarding claim 4, Liebowtz et al. disclose the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a time between calls parameter for each of the plurality of communication connections *("data queue is preferably assigned its own CIR" interpreted as allocating a predetermined portion of the bandwidth to*

each of the plurality of communication connections; Fig. 7B, col. 5, lines 1 – 37; "the port CIR is a guaranteed bandwidth from the port" also interpreted as allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; col. 16, lines 47 – 53; "sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at specified times for transmission; silence intervals in voice conversations" interpreted as a time between calls parameters; col. 5, lines 50 – 67; col. 6, lines 46 – 51; col.15, lines 21 – 28).

Regarding claims 5, 36, Liebowtz et al. disclose the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a message size parameter for each of the plurality of communication connections, the set of uniquely configurable communication parameters includes a message size parameter (*"data queue is preferably assigned its own CIR" interpreted as allocating a predetermined portion of the bandwidth to each of the plurality of communication connections; Fig. 7B, col. 5, lines 1 – 37; "the port CIR is a guaranteed bandwidth from the port" also interpreted as allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; col.16, lines 47 – 53; "the size of the burst buffer is set by the network-wide parameter, 'packet.length'"; col. 4, lines 66 – 68; "formats queue size information, as well as stream request information" interpreted as setting a message size parameter; col. 6, lines 27 – 33, Table I*).

Regarding claims 6, 28, 37, 45, 54, Liebowtz et al. disclose the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a sending buffer size for each of the plurality of communication connections; the set of uniquely configurable communication parameters includes a parameter that controls a buffer size *("data queue is preferably assigned its own CIR" interpreted as allocating a predetermined portion of the bandwidth to each of the plurality of communication connections; Fig. 7B, col. 5, lines 1 – 37; "the port CIR is a guaranteed bandwidth from the port" also correlates to allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; col. 16, lines 47 – 53; "size of the burst buffer" interpreted as sending buffer size for each of the plurality of communication connections; col. 4, lines 63 – 67, Table I as* the set of uniquely configurable communication parameters*).*

Regarding claims 8, 18, Liebowtz et al. disclose the step of associating establishing the worker object for each one of the plurality of communication connections includes the step of using the worker object to produce instantiate one of the plurality of communication connections *("creates an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module, and "stores real time data from the outgoing data queues associated with ports configured to receive real time data in FIFO" interpreted as establishing the worker object for each one of the plurality of communication connections including the step of using the worker*

object to instantiate one of the plurality of communication connections; Fig. 3, Fig. 4, col. 4, lines 35 – 50).

Regarding claims 9, 59, Liebowtz et al. disclose the step of partitioning the data to form a plurality of partitioned data streams prior to distributing the data to amongst the worker objects *("break each frame into smaller segments called fragments and stores as many fragments as possible in a burst buffer" interpreted as partitioning the data to form a plurality of partitioned data streams prior to distributing the data amongst the worker; Fig. 3, Fig. 4, col. 4, lines 51 – 56).*

Regarding claims 10, 31, 46, 47, 50, 60, Liebowtz et al. disclose the step of partitioning the data to form the plurality of partitioned data streams prior to distributing the data amongst the worker objects includes the step of partitioning the data based on a type of data *("real time data and non real time data" interpreted as partitioning the data based on a type of data; col. 5, lines 7 – 22).*

Regarding claims 11, 48, 61, 62, Liebowtz et al. disclose wherein the step of partitioning the data to form the plurality of partitioned data streams includes the step of establishing a one-to-one correspondence between the plurality of partitioned data streams and the worker objects *(col. 5, lines 18 – 28, "point-to-point connection"; col. 16, lines 40 – 46)*

Regarding claims 12, 22, Liebowtz et al. disclose the step of distributing the data to amongst the worker objects includes the step of transferring a subset of the data to one of the worker objects in response to a request for data from the one worker object *("all data streams share the burst buffer regardless of whether*

they contain voice, video or data" correlates to transferring a subset of the data to one of the worker objects in response to a request for data from the one worker object; col. 16, lines 16 – 21).

Regarding claims 13, 23, 30, Liebowtz et al. disclose the step of distributing the data to amongst the worker objects includes the step of using a data transmission object *("processing data flow and functions performed, and Fragment Assembler/ Disassembler (FAD)" correlates to distributing the data amongst the worker objects including the step of using a data transmission object; col. 4, lines 15 – 50).*

Regarding claim 14, 24, 25, 43, 52, Liebowtz et al. disclose the step of forming the messages using the distributed data within each worker object includes the step of forming the messages within each worker object using a parameter of the worker object that controls the size of the messages *(element "frame.length" correlates to forming the messages within each worker object using a parameter of that worker object that controls the size of the messages; col. 14, table I).*

Regarding claims 15, 26, 34, Liebowitz et al. disclose the method, system of claimed wherein the step of delivering the messages formed within one of the worker objects including the step of delivering the messages formed within the one worker object to the underlying layer based on a parameter of the one worker object that affects the rate at which the messages are delivered to the underlying layer *("FAD examines each frame in accordance with the high level application protocol corresponding to the source of that frame " correlates to*

delivering the messages formed within the one worker object to the underlying layer based on a parameter of the one worker object that affects the rate; Abstract, col. 6, lines 16 – 31).

Regarding claim 16, 27, 35, 56, Liebowitz et al. disclose wherein the step of delivering the messages formed within the one worker object to the underlying layer based on the parameter of one worker object that affects the rate at which the messages are delivered to the underlying layer includes the step of using a time between calls parameters *("FAD examines each frame in accordance with the high level application protocol corresponding to the source of that frame " correlates to delivering the messages formed within the one worker object to the underlying layer based on a parameter of the one worker object that affects the rate; col. 6, lines 16 – 31; "sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at specified times of transmission; silence intervals in voice conversations" correlates to a time between calls parameters; Abstract, and col. 5, lines 50 – 67; col. 6, lines 46 – 51; col. 15, lines 21 – 28).*

Regarding claim 17, Liebowtz et al. disclose a system for transmitting data through a communication link having a bandwidth using a plurality of communication connections via a communication link *("prioritizes data into bursts using a fragmentation protocol, and organizes bursts in at least one of a plurality of lots constituting a time division multiple access (TDMA) frame,..and dynamic assignment of slots depends on the committed information rates (CIR)" correlates to the system of transmitting data through a communication link having a bandwidth using a plurality of communication connections; col. 2, lines 40 – 62,*

Fig. 7B, Fig. 2, col. 5, lines 58 – 64, Fig. 8, col.17, lines 10 – 26), the system comprising: a communication object that distributes the data amongst the plurality of communication connections *("creates an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module; Fig. 4, col. 4, lines 35 – 50; Fig. 4, element 66 FAD correlates to a communication object)*; and a plurality of worker objects, wherein each worker object is associated with one of the plurality of communication connections and is configured to form messages using the data distributed to the communication connection associated with that worker object based on a parameter of that worker object *("creates an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module" interpreted as a plurality of worker objects; Fig. 4, col. 4, lines 35 – 50)*, Liebowtz et al. also disclose wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth *(element 174, element 176, 64 kbps CBR, 32 kbps CBR, Fig. 8, col. 17, lines 10 – 26, lines 44 – 57)*.

Liebowitz et al. do not disclose explicitly wherein each worker object is configured to deliver the messages formed within that worker object to an underlying layer of the plurality of communication connections so that each

communication connection uses no more than the respective predetermined portion of the bandwidth allocated to that communication connection.

Toporek et al. in the same field of endeavor teach wherein each worker object is configured to deliver the messages formed within that worker object to an underlying layer of the plurality of communication connections so that each communication connection uses no more than the respective predetermined portion of the bandwidth allocated to that communication connection *("the information goes through the transport layer (e.g. TCP) and then through the IP layer which is the networking layer….." interpreted as delivering the messages to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth; Fig. 2, col. 10, lines 21 – 67; col. 17, lines 34 – 52).*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Liebowitz et al. to include the features of each worker object delivers the messages formed within that worker object to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of bandwidth allocated to that communication connection as taught by Toporek et al. in order to provide a method for managing memory for buffering information communicated over an internet connection established across a satellite link *(as suggested by Toporek et al., see col. 3, lines 7 – 10).*

Regarding claim 29, Liebowtz et al. disclose a system for transmitting data through a communication link using a plurality of communication

connections via the communication link having a bandwidth *("prioritizes data into bursts using a fragmentation protocol, and organizes bursts in at least one of a plurality of lots constituting a time division multiple access (TDMA) frame,..and dynamic assignment of slots depends on the committed information rates (CIR)" correlates to the system of transmitting data through a communication link having a bandwidth using a plurality of communication connections; col. 2, lines 40 – 62, Fig. 7B, Fig. 2, col. 5, lines 58 – 64)*, the system comprising: a communication process configured to partition that partitions the data to form a plurality of partitioned data streams *("creates an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module; Fig. 4, col. 4, lines 35 – 50; Fig. 4, element 66 FAD correlates to a communication object)*; and a plurality of worker processes, wherein each one of the plurality of worker processes is configured to have a set of uniquely configurable communication parameters, is configured to receive the partitioned data from the communication process, is configured to form messages using the partitioned data *("creates an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module" interpreted as a plurality of worker processes; Fig. 4, col. 4, lines 35 – 50, and "collection of fragments is called the payload" correlates to forming messages using the distributed data within each worker object, and recited "payload header which identifies the location of each fragment" as a parameter of that worker object; col. 4, lines 52 – 67)*, and except is configured to deliver the messages containing the partitioned data to an

underlying layer of the plurality of communication connections based on the set of uniquely configurable communication parameters for that worker process, Liebowtz et al. also disclose wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth *(element 174, element 176, 64 kbps CBR, 32 kbps CBR, Fig. 8, col. 17, lines 10 – 26, lines 44 – 57).*

Liebowitz et al. do not disclose explicitly each worker is configured to deliver the messages containing the partitioned data to an underlying layer of the plurality of communication connections based on the set of uniquely configurable communication parameters for that worker process.

Toporek et al. teach each worker object is configured to deliver the messages containing the partitioned data to an underlying layer of the plurality of communication connections based on the set of uniquely configurable communication parameters for that worker process *("the information goes through the transport layer (e.g. TCP) and then through the IP layer which is the networking layer….." interpreted as delivering the messages to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth; Fig. 2, col. 10, lines 21 – 67; col. 17, lines 34 – 52).*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Liebowitz et al. to include the features of each worker object delivers the messages formed within that worker object to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of bandwidth allocated to that communication connection as taught by Toporek et al. in order to provide a method for managing memory for buffering information communicated over an internet connection established across a satellite link *(as suggested by Toporek et al., see col. 3, lines 7 – 10).*

Regarding claim 32, Liebowtz et al. disclose wherein each of the plurality of worker processes is based on a worker object *("created several burst buffers depending on the amount of data received from the user access devices via Frame Handler module" interpreted as the plurality of worker processes is based on a worker object; Fig. 3, Fig. 4, col. 4, lines 32 – 50).*

Regarding claims 38, 49, Liebowtz et al. a system for transmitting, data through a communication link having a bandwidth *("prioritizes data into bursts using a fragmentation protocol, and organizes bursts in at least one of a plurality of lots constituting a time division multiple access (TDMA) frame,..and dynamic assignment of slots depends on the committed information rates (CIR)" correlates to the system of transmitting data through a communication link having a bandwidth; col. 2, lines 40 – 62, Fig. 7B, Fig. 2, col. 5, lines 58 – 64, Fig. 8, col.17, lines 10 – 26), comprising: a communicat*ion station having a processor and a memory communicatively coupled to the processor *("a processor having a*

digital memory device" correlates to having a processor and a memory communicatively coupled to the processor; col. 21, lines 33 – 39), wherein the processor is programmed to provide a plurality of worker objects *("said processor being operable to generate bursts using data received" correlates to programmed to provide a plurality of work objects; "processing data flow and functions"; col. 4, lines 15 – 24)*, wherein each one of the plurality of worker objects is configured to form messages using one of a plurality of partitioned data streams and to produce a separate communication connection through the communication link *("collection of fragments is called the payload" as forming messages using the distributed data within each worker object, and recited "payload header which identifies the location of each fragment" as a parameter of that worker object; col. 4, lines 52 – 67, col. 5, lines 18 – 28; and recited "said processor being operable to generate bursts using data received" correlates to programmed to provide a plurality of work objects that each instantiates a separate communication connection through the communication link; col. 21, lines 33 – 39; 51 – 65*), wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth *(element 174, element 176, 64 kbps CBR, 32 kbps CBR, Fig. 8, col. 17, lines 10 – 26, lines 44 – 57)*, and wherein each of the plurality of worker objects includes a set of communication connection parameters that are uniquely configurable to determine the manner in

which the messages are sent *(Table I)* except by each of the plurality of worker objects to an underlying layer of the communication link.

Liebowitz et al. also do not disclose explicitly the messages are sent by each of the plurality of worker objects to an underlying layer of the communication link.

Toporek et al. in the same field of endeavor teach the messages are sent by each of the plurality of worker objects to an underlying layer of the communication link *("the information goes through the transport layer (e.g. TCP) and then through the IP layer which is the networking layer….." interpreted as delivering the messages to an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth; Fig. 2, col. 10, lines 21 – 67; col. 17, lines 34 – 52).*

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Liebowitz et al. to include the features of the messages are sent by each of the plurality of worker objects to an underlying layer of the communication link as taught by Toporek et al. in order to provide a method for managing memory for buffering information communicated over an internet connection established across a satellite link *(as suggested by Toporek et al., see col. 3, lines 7 – 10).*

Regarding claim 39, Liebowtz et al. disclose wherein the communication station is a sending communication gateway *(Fig 5, elements 1, 2, 3 interpreted as sending communication gateway; Fig. 4, col. 6, lines 46 – 55).*

Regarding claim 40, Liebowtz et al. disclose wherein the communication station is a receiving communication gateway *(Fig 5, elements 1, 2, 3 interpreted as sending communication gateway; Fig. 4, col. 6, lines 46 – 55).*

Regarding claim 41, Liebowtz et al. disclose wherein each of the separate communication connections uses a connection-oriented communication protocol *("to assign a fixed and guaranteed bandwidth to a PVC" interpreted as using a connection-oriented communication protocol; Fig. 8, col. 16, lines 33 – 42, also "TCP/IP" correlates to separate communication connection using a connection-oriented communication protocol, col. 2, lines 22 – 24).*

Regarding claim 44, Liebowtz et al. disclose wherein the set of communication connection parameters includes a message size parameter and a time between calls parameter *(Table I, "the size of the burst buffer is set by the network-wide parameter, 'packet.length'"; col. 4, lines 66 – 68; "formats queue size information, as well as stream request information" correlates to a message size parameter; col. 6, lines 27 – 33, and "sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at specified times of transmission; silence intervals in voice conversations" interpreted as a time between calls parameters, col. 5, lines 50 – 67; col. 6, lines 46 – 51; col. 15, lines 21 – 28).*

Regarding claim 53, Liebowtz et al. disclose wherein the step of uniquely configuring the set of communication connection parameters uniquely associated with each of the worker processes *(col. 14, Table I)* includes the steps of configuring a message size parameter for each of the worker processes

processes *("the size of the burst buffer is set by the network-wide parameter, 'packet.length'"; col. 4, lines 66 – 68; "formats queue size information, as well as stream request information" interpreted as setting a message size parameter; col. 6, lines 27 – 33; col. 14, table I; "the size of the burst buffer is set by the network-wide parameter"; col. 4, lines 66 – 68; "formats queue size information, as well as stream request information" correlates to setting a message size parameter; column 6, lines 27 – 33)* and configuring a time between calls parameter for each of the worker processes *("sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at specified times of transmission; silence intervals in voice conversations" interpreted as a time between calls parameters; col. 5, lines 50 – 67; col. 6, lines 46 – 51; col. 15, lines 21 – 28).*

Regarding claim 55, Liebowtz et al. disclose the step of uniquely configuring the sets of communication connection parameters uniquely associated with each of the worker processes *(Table I)* includes the step of configuring the sets of communication connection parameters to provide a reserved bandwidth for retransmissions *("transmission capacity provided by the number of slots per time frame which the terminal has permanently reserved" interpreted as to provide a reserved bandwidth for retransmission; col. 11, lines 41 – 45, Table I).*

Regarding claim 58, Liebowtz et al. disclose wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a message size

parameter and a time between calls parameter for each of the plurality of communication connections *("the size of the burst buffer is set by the network-wide parameter, 'packet.length'"; col. 4, lines 66 – 68; "formats queue size information, as well as stream request information" interpreted as setting a message size parameter; col. 6, lines 27 – 33; col. 14, table I; "the size of the burst buffer is set by the network-wide parameter"; col. 4, lines 66 – 68; "formats queue size information, as well as stream request information" correlates to setting a message size parameter; column 6, lines 27 – 33 ("sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at specified times of transmission; silence intervals in voice conversations" interpreted as a time between calls parameters; col. 5, lines 50 – 67; col. 6, lines 46 – 51; col. 15, lines 21 – 28).*

Regarding claim 63, Liebowtz et al. disclose wherein the set of communication connection parameters includes a time between calls parameter *("sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at specified times of transmission; silence intervals in voice conversations" interpreted as a time between calls parameters; col. 5, lines 50 – 67; col. 6, lines 46 – 51; col. 15, lines 21 – 28).*

Regarding claim 64, Liebowtz et al. disclose wherein the step of uniquely configuring the set of communication connection parameters uniquely associated with each of the worker processes includes the step of configuring a time between calls parameter for each of the worker processes *("sends a timing indicator to TMC indicating the precise time that it can transmit a burst; at*

specified times of transmission; silence intervals in voice conversations" interpreted as a time between calls parameters; col. 5, lines 50 – 67; col. 6, lines 46 – 51; col. 15, lines 21 – 28).

Response to Arguments

4. Applicant's arguments filed on 10/08/2009 with respect to claims 1, 3 – 6, 8 – 18, 22 – 32, 34 – 41, 43 – 50, 52 – 56 have been fully considered but they are not persuasive.

Regarding claims 1, 17, 29, 38 and 49, applicant argues the action also asserts that forming messages using the distributed data within each work object (or process) is disclosed by Liebowitz et al. as "collection of fragments called the payload" as, and that a parameter of the worker object is disclosed as "payload header which identifies the location of each fragment". (See 05/08/2009 action, page 23). This assertion is incorrect *because Liebowitz et al. fails to disclose forming messages using the distributed data within each work object (or process).* First, Liebowitz et al. discloses breaking each frame into smaller data segments or fragments but fails to disclose forming messages based on a parameter to establish a respective predetermined portion of the bandwidth. (See column 4, lines 57-63). Second, Liebowitz et al. discloses identifying the location of each fragment within the payload header but fails to disclose the manner to form messages based on a parameter to establish a predetermined portion of the bandwidth recited by the claims. (See column 4, lines 57-63). The purpose of identifying the fragments is to assemble the proper fragments at the receiving

end and thereby not to establish a predetermined portion of the bandwidth. (See column 4, lines 57-63).

Further, the action asserts that Liebowitz et al. discloses delivering the messages formed within each worker object (or process) as "creating an outgoing data queue corresponding to each user access device for storing data received therefrom via a corresponding Frame Handler module" and also asserts that this discloses a plurality of worker processes. (See action, pages 22-23). This assertion is incorrect because *Liebowitz et al. fails to disclose the manner in which the Frame Handler creates an outgoing queue based on a parameter to establish a predetermined portion of the bandwidth to deliver formed messages*. The Fragment Assembler/Disassembler (FAD) does not create an outgoing data queue based on any parameters from the Frame Handlers but the outgoing data queue is actually addressed to user access devices connected to that terminal. (See column 4, lines 45-50). Therefore, Liebowitz et al. fails to disclose delivering formed messages within each worker object.

In response to applicant's remark/argument, Examiner respectfully disagrees.

Examiner contends reference Liebowitz et al. teach "forming messages using the distributed data within each work object" Examiner interpreted "forming messages using the distributed data within each work object" as collection of fragments is called the payload" and "payload header which identifies the location of each fragment" interpreted as a parameter of that worker object; see Liebowitz et al. col. 4, lines 52 – 67.

Applicant then argues reference Liebowitz et al. fails to disclose the manner in which the Frame Handler creates an outgoing queue based on a parameter to establish a predetermined portion of the bandwidth to deliver formed messages.

In response to applicant's remark/argument, Examiner respectfully disagrees.

Examiner contends reference Liebowitz et al. teach a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth.

Examiner interpreted a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth (element 174, 64kbps) and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth (element 176 32kbps) which is different from the first respective predetermined portion of the bandwidth. It is obvious 32kbps bandwidth is different from 64 kbps bandwidth, see Liebowitz et al. element 174, element 176, 64 kbps CBR, 32 kbps CBR, Fig. 8, col. 17, lines 10 – 26, lines 44 – 57.

Applicant is reminded that, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The

claim is directed towards allocating bandwidth for transmission in satellite/ wireless environment.

Applicant then further argues that "in addition to not disclosing the worker object (or worker processes) as recited in claims 1, 3-6, 8-18, 21-32, 34-41, 43-50, 52-56 and 58-64, it would not be obvious to one of ordinary skill in the art to combine the disclosures of Liebowitz et al. in the view of Toporek et al. In particular, the action alleges that Toporek et al. discloses "providing an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth as 'the information goes through the transport layer (e.g. TCP) and then through the IP layer which is the networking layer... '" (See e.g., fragments a payload header containing the location of each fragment, a corresponding fragment identifier and bandwidth requests for transmission along with the Transport and IP layers' control information. (See column 4, lines 51-63). This additional header and control information increases the size of each message and thereby decreases the throughput of the system. Where the asserted rationale for combining the references is to use no more than a predetermined portion of bandwidth, such a combination would appear to defeat this purpose by adding a payload header that increases the size of each message, thereby necessitating more bandwidth.

In response to applicant's remark/argument that it would not be obvious to one of ordinary skill in the art to combine the disclosures of Liebowitz et al. in the

view of Toporek et al, Examiner respectfully disagrees. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See MPEP ¶ 7.37.04.

Examiner relied upon Reference Toporek et al. for the specific limitation and that there is certain motivation to combine with the reference of Liebowitz et al.

The combined system of references of Liebowitz et al. and Toporek et al. teaches the claimed subject matter of "providing an underlying layer of the plurality of communication connections so that each communication connection uses no more than a predetermined portion of the bandwidth.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571)272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2476 <2Q10:01_16>

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2476